GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:4110
ANSWERED ON:20.04.2005
DISCOVERY OF A RIPENING ENZYME
Verma Shri Ravi Prakash

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the National Centre for Plant Genome Research has identified a gene that produces a ripening-enzyme;

(b) if so, whether the said gene would make tomatoes free of oxalic acid which causes kidney stones;

(c) if so, the details thereof; and

(d) the other such areas of research conducted by the Government on other vegetables relevant to human health?

Answer

MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF SCIENCE & TECHNOLOGY AND MINISTER OF STATE (INDEPENDENT CHARGE) OF THE DEPARTMENT OF OCEAN DEVELOPMENT (SHRI KAPIL SIBAL)

(a): Yes, Sir. The National Centre for Plant Genome Research (NCPGR) New Delhi, has identified a gene that produces ? - mannosidase, a fruit ripening enzyme.

(b) & (c): It is expected to make use of the gene in increasing the shelf life of tomato and not for making it free of oxalic acid. However, the NCPGR, has isolated another gene for Oxalate Decarboxylase (OXDC)which is expected to reduce the kidney stone causing oxalate contents in tomato.

(d): Research efforts are also being made to introduce the OXDC gene in leafy vegetables like spinach and other crops viz. groundnut, soybean to reduce the oxalate contents. In addition, potato is being developed with high protein contents including essential amino acids.